

T-13-4-1 – “Survey for *Rana sevosa* and *Ambystoma tigrinum*, Two Critically Imperiled (S1) Pond-Breeding Amphibians in St. Tammany Parish Louisiana”

Abstract: Fourteen temporary ponds in St. Tammany Parish, Louisiana were surveyed for the presence of *Ambystoma tigrinum* and *Rana sevosa* larvae. Both species are considered critically imperiled in Louisiana. Both breed in small, isolated, fish-free, temporary ponds. Both species are primarily fossorial as adults. The objective of this study was to update distribution and habitat information for these species in Louisiana.

Potential sample sites were located with aerial photography, and final selection was based on access and presence of water. Ponds were surveyed during April, 2003. Larvae were sampled because they persist in ponds longer than adults and are therefore easier to catch. Quantitative net sampling was conducted within 0.5-m² drop boxes and qualitative net sampling was conducted for 20 minutes outside each drop box. Habitat features characterized included pond size, canopy closure, and coarse woody debris volume.

Larvae of the two target species were not collected despite the historical occurrence of the species in at least 2 of the 14 ponds sampled. At least one of the ponds known to harbor the species historically has been developed and no longer exists. Low rainfall during the study period appeared to have resulted in early drying of ponds, and may have contributed to the lack of observations. However, several non-target species (*Rana spp.* and *Hyla spp.*) were observed and collected.

Most ponds were surrounded by pine plantations. The most common trees within the ponds were tupelo gum (*Nyssa sp.*) and oaks (*Quercus spp.*). The study period was not long enough to characterize pond hydroperiods.

The Principle Investigators do not believe that the lack of target species observations was due to methods used. Explanations posited include: habitat changes, invasive species, and pathogenic fungi. These factors may reduce the ability of these species to persist in St. Tammany Parish. However, this study was sort in duration and suitable habitat does exist in the parish. (Abstract by A. Ardoin {2007} from: “Survey for *Rana sevosa* and *Ambystoma tigrinum*, Two Critically Imperiled (S1) Pond-Breeding Amphibians in St. Tammany Parish Louisiana”, Final Report (June 2003); Leonard, N.E., J.H.K. Pechmann, A.M. Devereux, and K.R. Chedalawada; University of New Orleans, New Orleans, LA; 15 pp.)

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